***Maps: Where does truth lie****?*

**Portal: Geographic Importance**

**Critical Challenge**

Critical Task

Examine 4 different maps of the same city. Determine the implied importance of various features.

Overview

In this challenge, students uncover the impact that a cartographer’s purpose and audience might have on mapping decisions and how these decisions might affect the messages we infer from a map.

Students begin by creating their own mental maps of a known place and comparing them with their classmates to highlight possible reasons why maps of the same location might differ. Then they examine 4 different maps of their city, region or province in order to:

* determine what information was excluded and included
* draw inferences about the map-makers’ purposes
* identify possible biases of the map-makers
* discuss the impressions these maps would create about the place

(from Portals to Geographic Thinking – The Anthology of Social Studies – pg. 111)

**Objectives**

**Broad Understanding**

Students will understand that questions of geographic importance necessarily arise when we decide what features to highlight on a map. They will understand that we can infer a map-maker’s purpose, intended audience and determinations about geographic importance.

**Requisite tools**

*Background knowledge*

*Criteria for judgment*

* criteria for a plausible inference (e.g. is supported by an accurate reading of the evidence, is consistent with our background knowledge, is the best or most likely explanation)

*Critical thinking vocabulary*

**Observation:**

**Inference:** A conclusion one draws based on assumptions. Inferences can be weak or strong, justified or unjustified and need to be examined.

*Thinking strategies*

*Habits of Mind:*

**Attentive to Detail:** Is careful in attending to detail.

***Suggested Activitives***

**Session One**

|  |  |
| --- | --- |
| **In this section, students will:** | **Instructions to the teacher** |
| *Be introduced to the concept of geographic importance through a concrete experience* | Invite students to individually create a freehand map of their school and its surrounding neighbourhood without referring to any resources beyond their own memory.  Ask students to compare their maps with at at least 2 other students. Ask them to identify at least 3 differences in their maps and 3 similarities. You might consider encouraging them to think about what neighbourhood features they each chose to include, the size of those features and the level of detail provided.  Suggest that all mapmakers need to make decisions about what to highlight and what to downplay in their maps and that we can infer the mapmaker’s sense of importance by using a variety of thinking strategies. |
| *Understand the concept of Geographic Importance* | Suggest that what is included or excluded in a map indicates decisions that have been made about ***Geographic Importance***.  Invite students to speculate reasons what would make some features or locations important. You may wish to capture their brainstorming on the web diagram provided (BLM #1) |
| *Be introduced to the critical challenge* | Share the critical challenge with students: *Examine 4 different maps of the same city. Determine the implied importance of various features.* |
| *Examine*  *details and make observations* | Remind students that it will be important to be **attentive to detail**. Suggest that one way to develop this habit of mind is to slow down when given a task and avoid jumping to conclusions. For this task, that may mean taking time to circle various details on each map before speculating what the mapmakers’ purpose might have been.  Provide students with 4 different maps of the same area (in this case, the city of Toronto).  Invite students to record their observations regarding what was included and excluded from each map on the organizer provided (BLM #2). |
| *Uncover*  *criteria for a plausible inference* | Suggest that once we have examined the evidence carefully, we are able to make plausible inferences about the purpose and audience of the map. You might liken this process to getting inside the mind of the mapmaker to determine his or her reasons for choosing certain features to include and exclude.  To help students uncover the criteria for a plausible inference, provide them with a copy of BLM #3: Is this a Plausible Inference? Suggest that students work with a partner to decide if each inference made about a map’s features is very likely, possible, unlikely or impossible. As students report their answers, suggest that there is a difference between an inference and a guess. An inference is supported by the evidence that we see in a document. We can make a direct link between the evidence and an inference. However, a guess might require more of a leap. A guess might require quite a bit of additional research to confirm whether or not it is true.  As a result of the class discussion, draw out the following **criteria** for a plausible inference.  A plausible inference is one that:   * is supported by an accurate reading of the evidence * is consistent with our background knowledge * is the best or most likely explanation   Consider posting this criteria on the wall for future reference. |
| *Draw*  *inferences from observations* | Invite students to now draw inferences from the observations they made about what was included and what was excluded on the maps they examined earlier.  Handout BLM #4: Observations and Inferences. Invite students to make inferences about the purpose and intended audience of the map based on the observations they have already made.  Encourage them to check their inferences against the criteria for a plausible inference as they work. |
| *Transition to independent practice* | Invite students to summarize in their own minds, the steps they would use next time when trying to figure out the purpose and intended audience of a map.  Ask them to share their ideas with a partner.  Considering capturing their ideas as a series of steps and posting these steps on the wall for future reference. For example, a summary of their thinking strategies might include:  - Brainstorm what you already know about the issue or location depicted in the map  - Circle or write down what you notice about what is included and what not included on the map  - Make inferences based on your observations  - Double-check that your inferences are plausible  Inform students that they will be practicing what they have learned about inferring geographic importance from maps within the context of their current unit. |

**Session two**

|  |  |
| --- | --- |
| **In this section, students will:** | **Instructions to the teacher** |
| *Build criteria for an informative and engaging title* | Invite students to revisit the the maps of Toronto from the previous session. Select one map from the previous session (consider projecting it on a large screen) and ask students to review their conclusions regarding the purpose and intended audience of that map. Gather their responses on the board.  Ask students to work with a partner to come up with at least 3 possible titles for that map. Invite them to share their responses with the class. Gather their ideas on the board or on a piece of chart paper.  Suggest that some titles on the list might be more effective than others. Invite students to select the 3 titles that they believe are the most effective. Discuss why these might be the best titles. During the class discussion, draw out the criteria for an informative and engaging title.  An informative and engaging title is one that:   * reflects the main purpose of the map * is likely to appeal to the intended audience of the map * is concise * distinguishes it from other similar maps   You might wish to capture this criteria on a piece of chart paper or in students’ notebooks for later reference. |
| *Apply*  *learning: Making observations and drawing inferences* | Provide students with several maps related to the topic they are studying. These might be maps of a particular location or area, depicting a particular issue across different areas.  Invite students to refer to the steps they created in the previous session that would assist them in inferring geographic importance. Suggest that they follow these steps and encourage them to use BLM #2 and #4 to guide their work.  **Assessment for learning:** Assess students notes Blackline Master #2 and #4 before they proceed to the next step |
| *Consolidate understanding by completing the critical challenge* | Suggest that students brainstorm possible titles for each map and assess each title according to the criteria developed for an informative and engaging title using BLM #5: Assessing map titles. |
| *Nurturing self-regulated thinking* | Consider gradually releasing responsibility to students for selecting the thinking strategies that would be most helpful when they infer geographic importance as the course progresses.  Initially, you might require or encourage students to use various thinking strategies they have been introduced to here.  As time progresses and students become more adept at using these thinking strategies, consider moving them toward self-regulated thinking by encouraging them to select which thinking strategies might be most useful when faced with similar challenges. |

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Blackline Master #1

**Geographic Importance**

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Blackline Master #2

**Examining the Details**

Map #1

|  |  |
| --- | --- |
| What details are included in the map? | What has been excluded from this map? |
|  |  |

Map #2

|  |  |
| --- | --- |
| What details are included in the map? | What has been excluded from this map? |
|  |  |

Map #3

|  |  |
| --- | --- |
| What details are included in the map? | What has been excluded from this map? |
|  |  |

Map #4

|  |  |
| --- | --- |
| What details are included in the map? | What has been excluded from this map? |
|  |  |

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Blackline Master #3

**Is this a plausible inference?**

For each of the following observations, decide whether the inference is plausible or not. Explain your reasoning for your decision.

|  |  |  |  |
| --- | --- | --- | --- |
| Observation | Possible Inference | Is this a Plausible Inference? | Explain your rating |
| The map shows the location of many parks in the city | The city is famous for its parks. | * very likely * possible * unlikely * impossible |  |
| There are no industrial areas in this city. | * very likely * possible * unlikely * impossible |  |
| The purpose of the map might be related to parks and recreation. | * very likely * possible * unlikely * impossible |  |
| There are not enough parks in the city. | * very likely * possible * unlikely * impossible |  |
| The most prominent features on the map are subway stops and bus route numbers. | The map is meant for people interested in taking public transit to get around. | * very likely * possible * unlikely * impossible |  |
| The creators of the map are trying to promote the use of public transit instead of driving. | * very likely * possible * unlikely * impossible |  |
| The city has significant problems with traffic congestion. | * very likely * possible * unlikely * impossible |  |
| Roads are in poor repair. | * very likely * possible * unlikely * impossible |  |
| It is easier to get around by public transit than by driving. | * very likely * possible * unlikely * impossible |  |

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Blackline Master #4

**Observations and Inferences**

Complete this chart for each of the maps you examined.

Reminder: A plausible inference is one that:

* is supported by an accurate reading of the evidence
* is consistent with our background knowledge
* is the best or most likely explanation

|  |  |  |
| --- | --- | --- |
| **Features included** | **Inferring Purpose**  **(Why might a reader be interested in this feature?)** | **Inferring Audience**  **(Who might be interested in knowing about this feature?)** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Conclusion (Identify your conclusion about the purpose and intended audience of the map)

**Purpose of the map:**

**Audience:**

Justifying my conclusion (Summarize the evidence that led you to this conclusion)

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Blackline Master #5

**Assessing Map Titles**

**Map # \_\_\_**

|  |  |
| --- | --- |
| **Possible Titles** | **Do they meet the criteria for an informative and engaging title?** |
|  | * reflects the main purpose of the map * is likely to appeal to the intended audience of the map * is concise * distinguishes it from other similar maps |
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**My Final Choice for a Title:**

**Map # \_\_\_**

|  |  |
| --- | --- |
| **Possible Titles** | **Do they meet the criteria for an informative and engaging title?** |
|  | * reflects the main purpose of the map * is likely to appeal to the intended audience of the map * is concise * distinguishes it from other similar maps |
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**My Final Choice for a Title:**